

(No Model.)

T. J. RICE.

WHEEL.

No. 396,366.

Patented Jan. 15, 1889.

Fig. 1

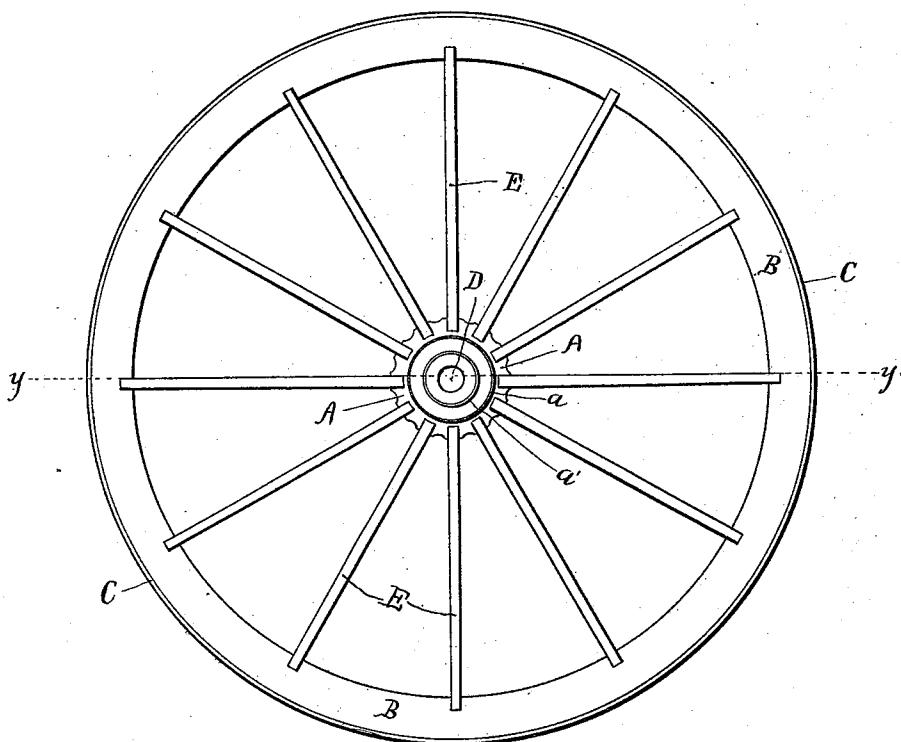


Fig. 2.

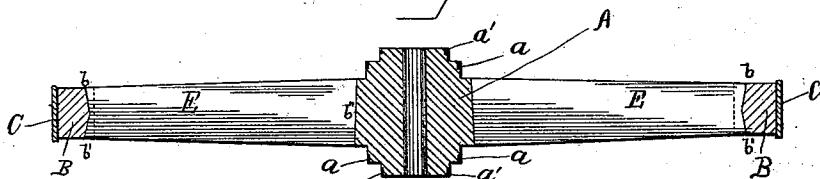


Fig. 3.



Fig. 4.

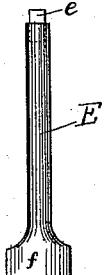
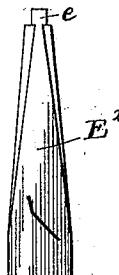


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

THOMAS J. RICE, OF BEULAH, COLORADO.

WHEEL.

SPECIFICATION forming part of Letters Patent No. 396,366, dated January 15, 1889.

Application filed June 26, 1888. Serial No. 278,269. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. RICE, a citizen of the United States, residing at Beulah, in the county of Pueblo and State of Colorado, have invented certain new and useful Improvements in Wheels; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to wheels; and its objects are, first, to facilitate the insertion and maintenance of the spoke in the hub; second, to hold the spoke firmly in position; third, to hold the spoke in the hub by frictional contact merely and against a tendency to displacement; fourth, to dispense with ordinary fastening media, as nuts, bolts, &c.; and, fifth, to attain these ends with structural simplicity and economy. I accomplish these purposes by the device illustrated in the accompanying drawings, in which—

Figure 1 represents an elevation of a wheel operatively embodying the essential elements of my invention. Fig. 2 is a transverse section thereof on the line $y y$ of Fig. 1. Fig. 3 represents the form of spoke contemplated to be used with my wheel, and Figs. 4 and 5 are modifications of the same.

The same designations indicate corresponding parts in the several views.

The life of a conveyance is proportional, in a measure, to the strength of its support—the wheels—and the stability of the wheels is materially controlled by the number of foreign bodies added as an integral part thereof. Thus the number of bolts, nails, or rivets introduced as fastening agencies is proportionally responsible for the longevity of the entire wheel. It is therefore the purpose of my invention to obviate entirely the necessity for independent fastening media by securing the parts correlative, so that they shall be held together by frictional contact solely.

The hub A has annular bases $a a'$ of unequal diameter, the latter of which serves as an abutment to the spokes E. The opposite

ends of the spokes are embedded in the felly B, whose inner surface inclines outwardly toward the points $b b'$, thus making the greatest thickness in the middle, in either direction from a transverse median line and whose outer surface accommodates the tire C. The modifications of the spoke E are shown by E' and E'' , both of which have an additional terminal pin, e , for insertion in the felly. The former is made of gas-pipe, and has an enlarged base, f , to rest in the hub, formed by welding a malleable shank to the end of the gas-pipe, and the latter of which is of similar construction to E, but is provided additionally with the terminal pin e and has the upper ends overlap the surface of the spoke.

In constructing my invention, the felly being solid, the tire set, and the spokes in their respective locations in the felly, the hub is then driven to its place and will be maintained therein by reason of the wedge-like action of the oppositely-inclined adjoining faces, respectively, of the hub and of the spoke, which are not horizontally formed. The resulting compression will amply suffice to make the wheel self-supporting.

The wheel can be made with or without tire, and the felly formed of any desirable thickness.

Having thus fully described my improvements, what I claim is—

As a new article of manufacture, a wheel whose spokes E are inwardly inclined at their bases $b b'$ reversely to the adjacent surface of the hub A, so that a wedge-like union of the hub and spokes is established and severed by driving the hub in or out of contact without dislocating the spokes, and whose outer bases, $b b'$, are inclined outwardly from a transverse median line to correspond with the adjoining faces of the felly, and thus be held by frictional contact solely, for the purpose set forth, and in the manner specified and illustrated.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS J. RICE.

Witnesses:

E. H. DICKINSON,
W. E. A. INNES.